

The Nexus Between Teaching and Research: A Qualitative Study Using two Focus Group on Academic Information Systems Teachers

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Abstract: Over the last two decades or so, the discussion of and research into the question of a nexus between teaching and research, has expanded exponentially. Much has been learnt, and said; with a growing rhetoric, with only general insights emerging and being supported by particular empirical evidence. The study of a nexus between teaching and research is not a single coherent field; rather it is beset by epistemological, methodological, political and practical differences. To date, much of the discussion and research on the nexus has arisen due to varying views and alleged agreed consensus as to the nature of the academic profession; the role of the academy/university and thus, how the concepts of teaching and research (including scholarship) have been conceptualised and enacted to inform teaching practice.

There is a continuing debate as to whether research undertaken by academic staff within the boundaries of a university adds value to the teaching and student learning. The purpose of this paper is to evaluate the usefulness of focus groups as a way of exploring and making sense of the conceptions staff have with regard to the nexus between teaching and research. Two focus groups were held with a sample of IS academic teachers. The merits and limitations of using a focus group are discussed given this area of investigation with some possible research areas highlighted. The paper argues that focus groups for this type of study are not appropriate on their own and should be considered as part of a much wider and multi methods research design when attempting to make sense of a complex, multifaceted and emotional areas of teaching, research, scholarship, administration, management and knowledge transfer; and the identify of IS in Higher Education.

Keywords: Focus Groups, Information Systems. Nexus between teaching and research. Academic Identity.

1. Introduction

Although difficult to define and elusive to measure, the teaching and research 'nexus' has been an area of historic and ongoing controversy. The teaching and research nexus is often assumed to exist within the university and investigating whether there are tangible links between teaching and research has been the subject of many discussions around the world, most notably in Australia, the USA and the UK.

The teaching and research nexus is usually associated with the process of enriching teaching by including aspects of an academic's current research, or that of colleagues, in support of student learning (Nexus Project, 1999).

In addition to research informing teaching, teaching may also inform research, although the literature substantiating and critically reviewing this concept is at an

earlier stage of development than the research informing teaching nexus. The nexus introduces the challenge of trying to convey to students a particular concept or theory that may stimulate thoughts in relation to current or future research by the teacher. (Nexus Project, 1999).

Historically, the academy was seen as a means of providing teaching. Newman writes, when exploring the idea of the academy, that other institutions are far better suited to act as instruments "extending the boundaries of our knowledge than a university" (Newman 1852, preface). However, Scott positions the idea that a modern university should behave like a finishing school for intellectual development and creativity; it should act like the last stage of general education and it should produce a professional elite. It should facilitate the production of scientific knowledge for the economic wealth and it should encourage and promote a cultural ideology that

expresses our sense of wellbeing (Scott, 1990). Scott (1995) also develops the view that higher education has moved from an elite educational system to a mass education system, which clouds the nature, purpose of a university even further and as such what constitutes the centrality of academic work.

The views expressed by Newman and Scott are contradictory and demonstrate that there exists tension between teaching and research and by extrapolation the role of an academic. For many academics today, teaching and research constitute the major functions of work (Coaldrake and Stedman, 1999). However, Brown and Atkins (1997) introduce another dimension that of course administration and academic management. Nevertheless, how these pursuits are balanced, harmonised and integrated is problematic and there is still the debate as to the possible existence of a nexus between teaching and research.

Ramsden and Moses (1992) suggest "few beliefs in the academic world command more passionate allegiance than the opinion that teaching and research are harmonious and mutually beneficial." (Ramsden and Moses, 1992, p273) Whilst, Ramsden and Moses are very skeptical about such an allegiance the quotation highlights the centrality of the debate to the work of universities.

Shils (1983) suggests the purpose of a university has a distinctive task; it is the methodological discovery and the teaching of truths about serious and important things. How this is achieved is never made explicit. Indeed, it is assumed that academics know how to achieve this and that it is a tacit skill, intrinsic to the function of being an academic. Brown and McIntyre, when referring to school teaching, suggest that what works well to be a 'good teacher' is a mix of craft knowledge and the craft of teaching (Brown and McIntyre, 1993). However, how academics develop and inform this craft knowledge is debatable and, indeed, how they use the craft of teaching to 'pass on this knowledge' to students has never fully been understood at least partly because little research work has looked at how what is taught is informed from (if at all) other academic activities, such as research, scholarship and consultancy.

The purpose of this paper is to evaluate the usefulness of focus groups as a way of exploring and making sense of the conceptions staff have with regard to the possible nexus between teaching and research. The all-embracing argument of this paper is that educational developments and enhancements are best served by research in, rather than on, educational practice.

"Research in practice, properly constructed and accomplished, offers practitioners a means of developing understanding of their practices and it is such understandings which are central to processes of achievement, enhancement and change in educational practice", (Bloomer and James, 2001, p1).

2. Mechanisms of enquiry: Research philosophies and methods

Research methods can be classified in various ways. The most common distinctions are between qualitative and quantitative research.

Qualitative research is a generic term for investigative methodologies described as ethnographic, naturalistic, anthropological, or participant observer research. It emphasises the importance of looking at variables in the natural setting in which they occur. Qualitative research methods were developed in the social sciences to enable researchers to study social and cultural phenomena. The central concerns of interpretative qualitative research paradigms are to understand human experiences at a holistic, interconnected and process level. Researchers who follow this way of looking at knowledge make sense of the complexities intertwined in these experiences and attempt to extract their significances (Berry, 1998). Although there is no general method of enquiry or one agreed and accepted protocol, there are some commonly accepted methods. Qualitative researchers do not attempt to verify a predetermined idea; instead, they explore details in order to achieve a holistic understanding of the complexities embedded in that which is studied, to interpret meanings and to look for new

insights from their discoveries (Easterby-Smith, 1991; Remenyi *et al.*, 1998). Examples of qualitative methods are action research, focus groups, ethnography, interviews, questionnaires, documents texts and artefact analysis.

It should be clear from the above that the word 'qualitative' is not a synonym for 'interpretive'. Qualitative research can be positivist, interpretive, critical, postmodernist and feminist depending on the philosophical stance of the researcher and what the research is hoping to achieve.

Interpretive researchers start out with the assumption that access to reality (given or socially constructed) is only possible through social constructions such as language, consciousness and shared meanings (IS World Research Pages - <http://www.qual.auckland.ac.nz/>). The philosophical base of interpretive research is hermeneutics and phenomenology. Interpretive studies generally attempt to understand phenomena through the meanings that people assign to them (IS World Research Pages - <http://www.qual.auckland.ac.nz/>).

Interpretive research does not pre-define dependent and independent variables, but focuses on the full complexity of human sense making as the situation emerges.

Quantitative research methods, on the other hand, were originally developed in the natural sciences to study natural phenomena. Examples of quantitative methods that are now well accepted in the social sciences include survey methods, laboratory experiments, formal methods (e.g. econometrics) and numerical methods such as mathematical modelling. These methods tend to have logical positivism as their epistemological base. Logical positivism uses quantitative and experimental methods to test hypothetical-deductive generalisations. Among the major implications of this approach are the need for independence of the observer from the subject being observed and the need to formulate hypotheses for subsequent verification. Positivism searches for causal explanations and fundamental laws, and generally reduces the whole to simplest possible elements in order to facilitate analysis (Easterby-Smith, 1991; Remenyi *et al.*, 1998; Friedman, 1953).

In order to help explore and understand the richness and complexity of reality Landry and Berville remind researchers that no single method or discipline can ever capture "the richness and complexity of reality, and that a diversity of methods, theories and philosophies are required" (Landry and Banville, 1992, p78). Orlikowski and Baroudi (1991) point out that much can be gained if pluralities of research perspectives are effectively employed to investigate phenomena. However, this issue remains a highly contested area of debate.

3. Focus groups

Morgan places focus groups firmly in the camp of qualitative research, positioned somewhere between participant observation and in-depth interviews (Morgan, 1997). Focus groups can also be called group interviews. It is difficult to identify and credit the exact founder of focus groups, however, the work of Merton has been given the accolade of founding focus groups. Greenbaum provides a succinct summary of the historic developments regarding focus groups.

"Focus groups have been commonly used in market research since the late 1960s. Some packaged food marketing organisations used the technique as early as the late 1950s and some people even trace the beginning of the focus group technique back to the publications in 1941 of the focused interview by Robert K Merton, Marjorie Fiske and Patricia Kendall. Most research practitioners agree however, that the technique began to be used regularly only in the late 1960s and early 1970s and that it has grown in popularity every year since. (Greenbaum, 1998, p 167).

Focus groups are usually semi-structured panel discussions derived of a sample group representing a specific larger population.

3.1 Why focus groups?

The academic justification for the employment of focus groups is based on

the premise that if the area of study is multidimensional with polarised views, regarding differing interpretation of the world, words and their meaning, then focus groups may be appropriate. Therefore, in order to identify and discuss potentially discordant opinions and perspectives regarding the possible nexus between teaching and research, focus groups may be potentially useful (Lichetnstein and Swatman, 2002).

Given the varying perceptions staff have regarding the likely nexus between teaching and research, focus groups were initially conceived as being an appropriate vehicle to explore group norms, values and behaviours surrounding the topic area. Focus groups were deemed appropriate as they would assist the researchers in establishing meanings that lie behind responses of staff and are relevant to identifying uncertainties and ambiguities surrounding the possible link between research and teaching. Allied to this, focus groups give an 'insiders' viewpoint to the realities that enshroud this phenomenon. In addition focus groups may provide the means to clarify and unpack normally unarticulated assumptions within natural conditions and settings to yield insight into the area of study, as "the group is a socially legitimate occasion for participants to engage in retrospective introspection to attempt to tease out previously taken for granted assumptions" (Bloor et al 2001, pp5-6).

When comparing focus groups with other qualitative research methods, such as one to one interviews, focus groups can prove economical on time, for both the researchers and the respondents, thus making it an efficient research method. Nevertheless, given this strong justification a number of issues and concerns about what can be claimed based on the data obtained by focus groups and the overall fitness for purpose has to be evaluated.

4. Context: Information systems and information management

Information Management (IM) can be viewed as encapsulating the "overall management issues ... and the interfaces between the different Information Systems (IS) that may exist within an organization" (Boaden and Lockett, 1991, p29). This process involves the planning for and

control of Information Systems (IS) through budgeting and evaluation processes, together with the organisational implications which flow from implementation and the use of IS and the Information Technology (IT) which underscores them (Earl, 1989, p25). IT is defined as the microprocessor-based technologies used to store, process, recall and transfer information, and which may form part of a network (Boaden and Lockett, 1991). Even with clear demarcations, the IS and IM disciplines are still characterised by a remarkable diversity.

It is generally accepted by the authors of this paper, that IS and IM are essentially pluralistic fields, founded on accepted knowledge from many other well-established source or reference disciplines. The insights from these other disciplines have proved of relevance to researchers, teachers and practitioners alike. Several differing approaches in terms of research paradigms, methodologies and methods exist. Some are deemed more applicable and acceptable depending on the historical, philosophical and conceptual baggage the researcher has and follows. Yet the genre of IS and IM research is complex, problematic and clouded by inconsistencies, misunderstandings and is still contested terrain where battles and wars are still being fought in academic circles.

5. Synthesis of the literature: The nexus between teaching and research

5.1 University teaching

Teaching can be viewed as the transfer of knowledge or, as Barrow (1991) claims 'the delivery of knowledge'. The educational process experienced by participants of higher education can be illustrated by Barrow as one where students not only achieve the particular objectives of a course but, in so doing, fulfil the general educational aims of autonomy, of the ability to participate in reasoned discourse, of critical self-evaluation, and of coming to a proper awareness of the ultimate contingency of all thought and action (Barrow, 1991).

The deep-rooted orthodox view of academics as 'teachers' in higher education was that they held the educational power and that they, via the exercise of their professional judgement, designed, taught (usually in a didactic manner) and assessed the student given their expert view of what was good or bad without entering into a dialogue or a learning contract with students as to what was required and what was expected to achieve the varying bands of marks available.

However, there have been a number of educational change initiatives over the last decade or so, which may be impacting both positively and negatively on the teaching process, such as life long learning, social inclusion, modularisation, student centred learning, etc. This has led many higher education institutions to reconfigure what is taught and how it is taught and assessed, within a climate of increased accountability and responsibility of staff and growing shift for students to become increasing independent and autonomous learners. These changes have therefore necessitated the role of the academic 'teacher' to change. This has meant that IS academic teachers have to deal and face the multitude of personalities now required to be a modern day university lecturer, i.e., teacher, researcher, teacher and researcher, consultant and researcher, social worker, administrator or any other combination.

MacFarlane's research work indicates that learners interact with teachers in three categories (MacFarlane, 1994):

- Structuring knowledge;
- Facilitating knowledge;
- Managing the learner's interaction with knowledge.

MacFarlane introduces the idea that structuring knowledge may require teachers to become research active. In order to be effective at structuring knowledge a deeper understanding and awareness of scholarship and research is needed, according to MacFarlane (1994).

Embedded in this transformation is the realisation that teaching means more than instructing, performing and disseminating knowledge, it extends to providing a context in which students can engage productively with subject matter (Ramsden

and Moses, 1992). This change of thinking is informed by research on student learning which emphasises the need for teachers to concentrate on what the learner does and why the learner thinks he or she is doing it, rather than on what the teacher does (Ramsden and Moses, 1992).

Nevertheless, it is anticipated that, for staff engaged in teaching and facilitating students learning, then they too should actively engage in research and scholarship if they are to be effective educators. By engaging in research, individual academics would participate in active learning, i.e., using knowledge in real situations and operating effectively in the four essential aspects of learning identified by Kolb (1983).

Kolb developed a simple framework to show how this can be achieved, and views learning as essentially a circular process

Of course the cycle could, and usually does, begin again at the point where the learner reflects further, refining or seeking new concepts, and experimenting again. The process, if one were to be strictly accurate, should perhaps be described as a spiral as, with the development of understanding, the original experience is continually being developed, so that the learner never actually returns to the original starting place. Kolb argues that the learning process can begin at any stage of the cycle if the learner moves clockwise.

Nevertheless, observational research into the literature in this area demonstrates that there is no clear definition or agreed consensus of what good teaching actually is and what exactly good teachers do and given the nexus debate between teaching and research of this paper, what informs what and how the teacher does what they do is also hazy.

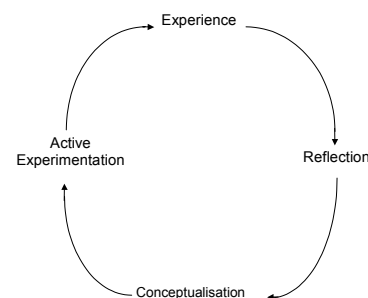


Figure 1: Kolb's experiential learning cycle

5.2 The essence of research: A multi-facetted concept

Brew suggests that the whole area of academic research occupies contested space, intellectually, socially, and politically (Brew, 2001). Others have suggested that research in the twentieth century has been conceptualised too narrowly as the publication of fundamental knowledge based on technical rationality (Brew, 2003). Attempting to define research is complex as many legitimate interpretations exist. A few are outlined here:

- Research may be defined as Scholarship of Discovery (Boyer, 1990);
- Research provides a means of generating, testing and validating knowledge (Brew, 2001);
- "Research is a systematic process of investigation, the general purpose of which is to contribute to the body of knowledge that shapes and guides academic and/or practice disciplines" (Powers and Knapp 1995, pp148);
- "Research is about advancing knowledge and understanding" (Oliver 1997, pp3).
- Research is about re-interpreting existing knowledge to form 'new' knowledge (Elton, 1992)
- "The generation of new knowledge and understanding continually improves our quality of life on every level" HERO – Research in the UK, 2005.

Brew (2001) and Scott (1990) suggest that research is not just a matter of knowledge transfer for economic gain but a guiding force that shapes the morals, cultural identity and cultural expression of, and for, the well-being of society. This creation of cultural expression (Scott, 1990) allows individuals to share and debate intellectual ideas that make sense and challenge the cultural consequences that the science and economic view of research has created. Research also allows society to express its cultural identity. Research can provide a source of intellectual, ideological language, which shapes our political and private lives (Scott, 1990).

Brew also adds additional avenues of enquiry with regards conceptualising research and its associated different meanings and activities (based on 57 individual interviews with academics in

Australia). Brew (2003b), building on earlier work (Brew, 2001), undertakes one of the largest qualitative studies in this area. However, the boundary of the work, focused on research conceptions. In particular, Brew questions:

"the taboos of academic research and suggests that the academy needs to reclaim the research agenda by developing new forms of research, which will provide a new justification for its existence" (Brew, 2001, p1).

After discourse analysis of the interviews, Brew develops four apparently distinct yet, overlapping views of research;

- The *domino view*, where the researcher focuses on the solutions to a problem and the answering of questions (Brew, 2003b).
- The *trading view* of research. In the foreground are the products of research, the end points, i.e., journal publications, grants, and social networks. Both the domino and the trading view of research are linked via peer recognition and reward. (Brew, 2003b).
- The *layer view* focuses inward as the focus of awareness is on the data containing ideas together with hidden meanings (Brew, 2003). Here, research is interpreted as a process of discovery, uncovering or creating underlying meanings (Brew, 2000).
- *The Journey view*, "in the foreground, is the personal existential issues and dilemmas of the researcher, linked through and awareness of the career of the research and viewed as having been explored for a long time" (Brew, 2003b, pp7).

The aforementioned views of research, coupled with Brew's views, indicate that research is a concept, widely acknowledged but not fully understood, and that no universal common understanding exists. This means that when researchers, practitioners, and policy makers discuss and measure/explore the teaching-research nexus, there is no common understanding as to what each means and is referring to. Hounsell (2002) suggests that;

"a search for commonality of impact of research on teaching has underplayed

differences in how research is conceptualised, organised and communicated in different disciplines. These subject differences have a strong influence in opening up (or closing down) opportunities in how undergraduate students can engage with the leading edges of a discipline and thus on how research might enrich teaching” (Hounsell, 2002, pp6-7).

However, there is a contested view that research does not add value to teaching or if it does then it is so marginal as not to be of any benefit (Hattie and Marsh 1996, 2002).

Hattie and Marsh (1996), whose seminal, comprehensive Meta Analysis study of 58 (29 of which were also used by Feldman, (1987)) studies on teaching /research relationships, analysed through discussion of various models of how teaching and research may be related, established similar results that a links does exist, but that it is marginal at best. Based on their chosen studies, 498 correlations were identified. Their correlation coefficient was 0.06.

If this view is accepted then universities may not be the most appropriate places in which to undertake research, as the majority of ideas expressed about a university are dependant on teaching and the strong integration of research with teaching. Gibb, an educationalist, states

“that there was now conclusive evidence that academic experience in research was unrelated to excellence in teaching” (Gibb, 1997). Nevertheless, Rowland attempts to counter Gibbs’s claim by positioning his argument as follows;

“researchers must be able to communicate their ideas (teach), and learn from their experience (as students); otherwise they fail as researchers. Teachers must be able to set a context with their students in which significant questions can be explored (research), and learn from these contexts (as students); otherwise they will fail as teachers. Moreover, students who are unable to investigate significant questions and communicate their findings, which are important aspects of teaching and research, will fail as students” (Rowland, 2000, pp1).

Table one provides an overview of the key authors engaged within this contested debate. Care should be taken when interpreting these research studies and drawing conclusions, as they have different research methodologies operating at differing levels of analysis (the University, the individual academic, the individual’s department, the students who are taught by the individual academic, etc). They have different educational settings, contexts and countries of origin.

Table 1: Key authors in the debate between teaching and research

There is NO Link between teaching and research	There is A LINK between teaching and research	There may be a LINK between teaching and research
<ul style="list-style-type: none"> • Centra (1983) • Gibb (1997) • Ramsden & Moses (1992) • Feldman (1987) • Clarke (2003) • Hattie & Marsh (1996) • Barnett, (1992) 	<ul style="list-style-type: none"> • Rowland (2000) • Hattie & Marsh (2002) • Jenkins & Blackman (1998) • Jenkins (2000) • Brew & Boud (1995) • Boyer (1990) • Andre & Frost (1997) • Brew (2001; 2003; 2004) • Neumann (1992; 1993) • Smeby (1998) ▪ Gibb (2002) 	<ul style="list-style-type: none"> • Braxton (1996)

6. The focus groups

6.1 Selection

Participants were not randomly selected. They were selected because they understood the area being investigated being seasoned IS academic staff at two post 1992 new Universities. This grouping can be seen as an existing social group, which was used to interacting with one another and with the facilitators. This was a conscious decision by the authors for practical reasons (the ease of availability of participants to participate and for epistemological reasons, as the participants knew and understood university teaching, academic research, the current issues affecting University life and the context of HE and IS in the UK). In addition to these reasons, the group members were also aware of the indigenous coding systems (known by one another) that exist within this community of practice (Holstein and Gubrium 1995). However, the participants selected did represent the possible and potential standpoints, values and attitudes that may exist when exploring and making sense of the conceptions staff have with regards the nexus between teaching and research.

The first focus group comprised the following staff;

- 2 Senior Lecturers (one responsible for all Post Graduate programmes within the Department and one responsible for all Undergraduate programmes within the Department, both seasoned teachers);
- 2 Research-Active Lecturers (one very experienced researcher with an international reputation and one researcher attempting to develop a research portfolio);
- 2 Non-Research-Active Lectures (both very experienced and seasoned teachers, one is responsible for the largest first year undergraduate module at the University and the other is responsible for one of the core fourth year honours modules;
- 1 Focus Group Facilitator

The second focus group comprised the following staff;

- 2 Research-Active Senior Staff members (one a head of school and the other a professor, they both had an

established research portfolio and were very experienced teachers);

- 2 Research-Active Lecturers (one a long-standing member of staff and the other a recent appointment to the department. They both had an established research portfolio and were very experienced teachers);
- 2 Non-Research-Active Lectures (both very experienced and seasoned teachers, one had been responsible for one of the largest undergraduate programmes, the other an experienced year tutor.
- 1 Focus Group Facilitator

The size of the groups were large enough to be representative and small enough to be manageable for one facilitator to organise, facilitate and record. It was hoped that this grouping would allow the researcher to tap into a natural occurring debate on the study area and to yield the depth and richness of responses needed (Kitzinger 1994).

6.2 Pre-focus group meeting activities

All the participants were contacted individually about their active involvement within the focus group. All were asked and gave their informed consent to participate and for their contributions to be audio taped. Each participant was then issued with three illustrative case studies (vignettes). The vignettes were hypothetical scenarios with particular features that suggest possible real life situations.

The vignettes were used as 'ice breakers', which then allowed the facilitators to steer the discussion in ways that were less personal and threatening, as the nexus between teaching and research is a highly emotive area of study. The use of the vignettes also allowed the participants to start to think, conceptualise and explain in their own language (given their understanding) what they experiences the nexus between teaching and research was.

The respondents were asked to have read, and reflected on the material, prior to the focus group, as recommended by Bloor et al (2001). (Please see Appendix One for the vignettes). Each participant was given a briefing sheet as to the

purpose of the focus group. Supplementary material was developed in the form of what can be described as a 'code of conduct' with regards respecting other views and agreeing to take the time to listen and consider others views. In addition to this, the issue of 'over-disclosure' (Bloor et al 2001) was covered, if over disclosure occurred then the facilitator would enact certain remedies and actions made clear to the participants in advance. It was not anticipated, given the non-sensitive nature of the subject matter, that over disclosure would occur, but the eventuality was addressed as part of the study's research design. Each participant was offered a summary of the findings for their interest and reference.

A simple pre-focus group questionnaire was developed to illicit simple personal information. The questionnaire covered length of teaching service, rating of their research activity, number of publications, rating of their willingness to undertake research activity to support teaching, the nature and level of the modules they taught on and an overall rating of what they thought the value of research activity brought to university teaching was. The questionnaire was issued at the start of each focus group, to encourage participants to cease discussing what they were discussing when they came into the room with colleagues and to start to concentrate their minds to the task at hand. Finally, several blank coloured slips of paper were developed and four key questions were placed on the third sheet of the flip chart.

6.3 Running the focus group

Participants were encouraged to discuss the vignettes with a partner, then to complete as many coloured slips of paper as they thought were needed, outlining what they thought the issues were and then to compare and discuss their slips of paper with a partner, to develop a common set of issues. These issues were then transcribed by the facilitator on to the first page and second page of the flip chart, in no particular order by asking each pair to report back.

The composite flip chart was then used to provide a structure to the session, by taking each issue and allowing the originating pair to explain it, then allowing the rest of the group to comment and

discuss the issue. At certain times the facilitator interjected to seek clarification using the questioning model of an open question, probe; probe again then a closed question, which summarised the key points for that issue before moving on to another issue.

Once the issues on the flip chart had been exhausted, the third page of the flip chart was used and the group were then asked to discuss and answer each question in turn, with the facilitator transcribing agreed points under each question.

Table 2: Focus group questions

<p>Question One: Please describe ways in which you link your research and teaching in your teaching</p> <p>Question Two: Do you make this link explicit? How?</p> <p>Question Three: How do you know it worked?</p> <p>Question Four: Do you think there should be a link between teaching and research? Why?</p>

The focus groups were scheduled to last for 75 minutes (allowing for an overspill of 15 minutes). However, each exceeded their allotted time.

7. Analysis and interpretation of results

There are numerous ways to analyse focus group data. The analysis undertaken for these particular focus groups was content analysis. Content analysis is concerned with the frequency and meaning of signs and symbols in language. At the core of content analysis is that words and signs can be assigned to conceptual categories. These categories can be tested, to reveal the importance of the idea by the frequency with which it appears in the text and conversation. In summary, the researcher searches for structures and patterned regularities in the words and makes inferences based on these regularities as the meanings are shaped in the context of the exchange between respondents (Silverman, 2000).

The focus groups were audio recorded and played back to aid the analysis numerous times in order to capture the richness of the data. A full transcript was not produced. This was due to time

constraints and also that a 100% complete transcript of the event is impossible to achieve, as it depends upon what you are trying to do in and with the analysis (Silverman 1993). There are many reasons why a 100% complete transcript is not possible, for example not being able to pick up on all the body languages being displayed and the quick interpersonal glances. Kruegger supports the view that a full transcription is not always necessary and playing audiotapes is appropriate for analysis (Kruegger, 1994). The tapes were played to identify the creation of categories, which led to themes and emergent issues and ideas to be extrapolated from the data. The authors found this more economical with time and that more could be learnt from listening to what and how the words were spoken, and from listening to who said what to whom rather, than reading them in a transcript.

The following emergent categories represent an initial analysis of what the staff perceptions were with regards the possible nexus between teaching and research. Relevant passages have been interwoven into the discussion to provide an outlet for the participants' voices to be heard.

7.1 Summary of findings

The conceptions identified by the focus groups have focused heavily on the perceived impact of system-wide changes over the last few years. Among the most commonly occurring challenges expressed by staff were;

- How to respond to the increasing diversity of the student body, in terms of their variable entry level skills and knowledge;
- How to introduce students to leading edge research findings and expecting the students to undertake research activity, when their backgrounds may preclude this way of thinking and working, at least initially;
- The inadequate motivation of the students to learn for themselves;
- Students perceived inability to do and recognise research;
- Too much time spent on academic programme management and endless paper work with regard quality assurance by academic staff;

- The frustration shared by many lecturers in being unable to stimulate students to think critically;
- The currency of the material, particularly in information systems, in terms of maintaining an up-to-date understanding of the changing context and application of information systems and ensuring that teaching material reflects this context;
- The feeling of being constrained to teach what is in a module descriptor rather than teaching what the student needs to know.

The focus groups concentrated initially on frustrations arising out of balancing competing 'professional' demands to teach, research, administrate and so on. There is a perception that the "goal posts" seem to have been shifted decidedly by University senior management towards rewarding research. There is a particular tension when staff feel under an obligation to publish or be in peril. Alternatively, that their time would be better spent maintaining stronger links with the profession and industries in consultancy activities rather than teach. The emerging research and publish or be in peril culture implies that lecturers feel that there are few rewards in seeking to integrate the curriculum effectively with research and that research excellence dominates over teaching excellence in IS and HE today.

Salient themes arising from the discussion will be discussed in further detail with actual focus groups voices indicated.

7.1.1 Salient theme one: Romance and pragmatism verses reality

Most of the participants agreed that their was some link or nexus between teaching and research, but some found it difficult to give concrete universally accepted evidence and examples in support of why they thought this. Many gave personal examples of how their research (if they were research active) directly fed into their teaching, i.e., dissertation supervision; or a particular lecture on a topic that they have researched within a module curriculum. One focus group participant stated;

"staff who do research and publish make the best lecturers, as they are up-to-date, passionate about their subject area and have fresh

and exciting ideas which stimulates students in class, after all who wants to be taught by someone who doesn't actually do it and tells you what others do" (Focus Group Participant 3).

However, they were not sure as to what impact or value adding attributes it had on students learning. Interestingly, the notion that a project supervisor 'teaches' a student how to do research gives a rather narrow view of teaching and research as this interpretation may demonstrate that a nexus may not be possible. An alternative view which could illustrate a possible nexus would be for staff to guide and mentor the student along the student's own research journey rather than to teach them by drawing on the supervisor's experience and knowledge of research to inform the student and perhaps become a mentor and critical friend rather than a teacher who simply tells and allows the students to learn.

What is surprising is that staff perceive the nexus to be unidirectional, i.e., from research to teaching. None of the group felt that teaching enhanced research. Throughout the discussion, there seemed to be two factions at play; the researchers and the teachers. It was generally agreed, that universities tended to operate a promotion strategy which encourages staff to excel in two out of three categories, i.e., teaching, research (which includes income generation) and programme administration. Even so, staff felt that excellence in research was deemed "superior" to that of the other categories and was deemed important. "The only way I will get a promotion is to do more research" (Focus Group Participant 1).

From the words used most staff felt that there was a nexus, but the language was more romantic and wishful rather than empirical and tangible.

This conception indicates that the perceived nexus between teaching and research is used to defend their notion of what a professional in higher education does and is. A participant in one focus group stated, "teaching and research are what real academics do" (Focus Group Participant 4). This rather defensive position indicates a desire to be accepted by the establishment and other

professional communities. The extent to which University staff need to emulate the old traditional universities is interesting. It can be argued that traditional universities have had a longer track record of academic research and have established some kind of professional research image, but why this is seen as the gold standard is not clear. Perhaps staff at these Universities see their professionalism emerging from the activities the established universities perform, rather than focusing on the integration of research and teaching, or teaching or some other type of work, as research gives them a professional identity and teaching does not.

One participant stated that there was no link between teaching and research, as time spent on doing both activities "diluted the other activity, so students got a worse deal in their teaching" (Focus Group Participant 2). The use of the word dilution is interesting as it gives the impression that each activity should be treated as separate but each is needed. They felt that with growing pressures to teach larger and larger class sizes, with varying educational backgrounds and non-standard entry reduced their ability and inclination to do research even though they did experience some covert pressure to become research active.

"Being at the cutting edge of knowledge was not the job of a teacher. The job of a teacher is to translate ideas and concepts into layperson language so that they can understand what the idea is and how that fits into business. In the early stages of a course students have to learn the facts and if staff get bogged down in doing research then the students will not learn the facts as researchers will concentrate on the research and papers rather than on the students" (Focus Group Participant 4).

This pressure was perceived to be growing with increased student numbers and greater emphasis on student retention.

Allied to the issues of the 'teacher', one researcher stated, "that their own research was so complex and highly sophisticated that the students here would not be able to

understand the work and its value" (Focus Group Participant 7). Another stressed the point that viable research would not be accessible to beginning students anyway. The word 'teacher' itself indicates that they see themselves as university teachers not lecturers and or academics and or researchers. These points indicate a general lack of clarity as to;

- What is teaching and research?
- What does it mean to be an academic?
- What constitutes professional practice in HE today?
- What is the essence and value of teaching?
- What is the essence and value of research?
- Should the nexus be strengthened between teaching and research (assuming one exists)?

7.1.2 Salient theme two: The meaning of words

Throughout the discussions, the facilitators at a number of junctures, requested clarity and sought to obtain an agreed non-contentious view of what certain words and concepts meant. Words and concepts like teaching, research, quality, relationship, scholarship, student learning, and nexus were all difficult to reach agreement on, as the participants had varying interpretations and understandings of what these words meant. This lack of clarity hindered the nature of the inquiry when discussing the possible nexus between teaching and research. What is surprising is that the academic literature on the nexus between teaching and research openly debates the nexus as being problematic, but the debate does not engage with the building blocks as to what constitutes the elements of the nexus, let alone exploring the interrelationships or nexus between the entities.

What was evident was that all participants indicated to some extent that teaching was about the teacher being "in control and teaching students things they ought to know" (Focus Group Participant 8). This view indicates a very didactic view of teaching, where the teacher is empowered to make all the decisions of what is learnt, how it is learnt, etc. Some participants, mainly the research active staff, felt that teaching was more than that, but could not fully explain it, it "just is" (Focus Group

Participant 3). However, what is surprising is that during the discussion of teaching, nobody mentioned learning. Brew and Mould suggest that when looking at the nexus between teaching and research, it is learning that is the link (Brew and Mould 1995), but this concept did not emerge in either focus group. Conversely, staff did indicate that they 'learnt' about their subject area from scholarly activity, which may involve doing academic research but this was not universally held, but it does open up the debate as to what is scholarship, research and teaching and how do staff master these discrete entities.

When asked specifically about the notion of scholarship participants gave several examples, some of which were contradictory, as to what constituted scholarship, which again indicated a lack of clarity and understanding. Within the academic literature the work of Boyer (which regards the scholarship of teaching and scholarship for teaching) is widely acknowledged. Boyer's view of scholarship considers that there is a more inclusive view of what it means to be a scholar, namely recognition that knowledge is acquired through research, synthesis, practice, and teaching. While scholarship originally meant engaging in original research, scholarship now has a broader and capacious meaning. Beyond the age-old "teaching Vs research" debate, there are four separate, yet overlapping functions: They are the scholarship of discovery; the scholarship of integration; the scholarship of application; and the scholarship of teaching (Boyer, 1990).

The only element on which the participants agreed on was that research was the creation of new knowledge, yet how this manifested itself into learning and teaching was unclear. Although consensus was achieved their interpretation of the essence of research is rather narrow, as compared with the discussion above. Their apparent view of research can be challenged as being naïve and it contradicts Boyer's overlapping and mutually inclusive idea of scholarship for and of teaching. This narrow view of research may inhibit thinking about the existence of a nexus between teaching and research, as if research is about knowledge creation, then how can it link into teaching and help students learn, as

once you have created knowledge the research process stops.

7.1.3 Salient theme three – Level of teaching

All participants agreed that research underpinning is needed to support honours/level 3 and postgraduate teaching. Several participants quoted the Quality Assurance Agency of Higher Education (QAAHE) code of practice on postgraduate teaching and the two Universities “latest obsession, with making sure that the module leader was research active, although the rest of the teaching team did not have to be” (Focus Group Participant 7). Although the use of the word ‘obsession’ indicates the difference between espoused values and politically correct actions.

7.1.4 Salient theme four: Local context

Given the two Universities history and current state, many of the participants (mainly the non research active teachers) believed that both their respective University should be primarily a vocational teaching institution. However, the teachers did acknowledge that both University policy documents on research were seen as having a greater significance than their respective learning and teaching strategy.

Staff conceptions that research is now more important than teaching is surprising as around 93% of income of both Universities is derived directly from teaching income, yet the new missions of the host sample institutions are aiming for higher research ratings and thus a greater share of the research monies allocated by the funding councils, influenced by the Research Assessment Ratings. Nevertheless staff now felt covertly pressured to undertake international research in something, which scares many of them, as promotion is invariably seen to be dependant on being active in research and publications rather than excelling in learning and teaching.

However, when pressed regarding the messages contained with the policy documents (Quality, Research and Learning and Teaching, (all separate)), a significant number of staff admitted not to have read them or cared, as “they were often developed by senior management

who had no idea of what was going on at the chalk face or who had been so long away from it that they had forgotten what it is like out there!” (Focus Group Participant 8).

It is not the words that are interesting here, except the use of the word chalk face that was unpredicted and interesting to the authors. The use of the word chalk face is out of the ordinary as it does not take into account research, consultancy and university administration, only teaching, which counters the messages, contained within these policy documents. What was interesting, was that there appeared to be a gap between what the rhetoric of what the institutional policies stated, with what teachers actually did, perhaps suggesting that the ‘backstreet policy implementers’ could enhance, or destroy any institutional desires with regards learning and teaching.

7.1.5 Salient theme five: Cognate context

The majority of participants indicated that information systems was still in its embryonic stages of development and that it was still trying to establish itself as an completely creditable academic area, which provided a problem with regards to what to teach and research and more importantly how, as practising the activities of teaching and research IS in Higher Education was like ‘walking on shifting sand’ (Focus Group Participant 5).

All participants agreed that the practice of teaching IS needed to be informed by current research, as the subject knowledge base changed quickly. However, there was a split as to how and who should inform the curriculum with regards to the current issues in business and commerce with regards information systems. 50% of the focus group participants indicated that staff should report what other researchers from other universities and agencies have found (the teachers), with the other 50% (the researchers) saying that as professionals:

“we should undertake the research as we will be learning more than just reporting what others have said, also, why should students come here given the rise of the internet and the

digital economy and listen to us, rather than going to those who have actually done the current work” (Focus Group Participant 8).

By the use of the word ‘we’ indicates that everyone should be actively engaged in research or Boyer’s view of scholarship. It can be inferred from the above text, that within the academy of information systems, there is a conflict, and to some extent an identity crisis as to how should information professionals engage in research to inform their practice?

8. Discussion of focus groups as being ‘fit for purpose’ given the aim of this paper

Given the discussion above, it is difficult to establish if the responses from the participants although interesting are valid and reliable given the research method used. Validity is concerned with whether the researcher is measuring the right concept, while reliability is concerned with stability and consistency in measurement. It is difficult to establish conclusive opinions as to what the ‘facts’ are, given the political and power structures that may be being played during the focus group, between participants and participants and facilitators. In addition numerous epistemological stances exist with and between the participants regarding the existence of a nexus between teaching and research, therefore, the idea and notion of reliability is questionable. With regards validity, given the fact that the focus groups are configured to suit the researchers interests it is difficult to confirm whether or not the researchers own ‘baggage’ pollutes the setting up, the running and the interpretations of the data to yield valid results, as it is the researcher’s interest which are being satisfied not the groups. The main value of focus groups is the use of groups and then interactions between people. This may be useful to researchers in this area as it helps to uncover otherwise hidden issues with regard teaching, research and the nexus that may exist between them. Coupled with this advantage, focus groups do give great insight and signals as to the pressures, individual attitudes, roles, norms and values on issues, which inform the researcher’s knowledge and understanding of the study area. The researcher can use this informed

knowledge base to inform and modify the study’s research design if and when appropriate.

The literature surrounding focus groups indicates that focus groups are able to arrive at a group consensus (Bloor et al, 2001). However, given the fuzzy often conflicting area of the nexus between teaching and research, especially the meanings of key words and the emotions that people have surrounding these key words and concepts, it is conceivable that focus groups perhaps do not truly arrive at a consensus. What other authors may have experienced maybe the power and political interplay being exercised to give the illusion of a consensus. Taking this issue a stage further, genuine normal behaviour is not visible within a focus group, so uncovering what the whole sample thinks is difficult to achieve, thus questioning the usefulness of focus groups for this type of study, as individual behaviour remains invisible or covert (Farquhar and Das 1999). Nevertheless, focus groups go some way in uncovering these behaviours, but focus groups need to work in conjunction with other research methods such as vignettes, narrative and story telling to move towards unpacking individual behaviours, attitudes, norms and values with regards exploring the possible nexus between teaching and research.

Although there is a place for all epistemologies it is acknowledged that that there is a tendency within the qualitative research communities to use focus groups as part of triangulation of data collection and analysis, to bring elements of positivism to show policy makers and people engaged in professional practice the merits of their research. Although one can understand and commend the use of triangulation to ensure rigour and relevancy the issue of measurement bias is a major problem for users of focus groups.

Focus group data is likely to “contain highly specific anecdotes and stories which may serve to qualify or elaborate the general endorsement of a norm or an attitude. However, the actual occurrences or theme of occurrences are more likely to be valid and reliable from responses to a structured questionnaire. Direct comparison is not possible and neither validation by triangulation” (Bloor et al

2001, p13). Focus groups at best give an awareness and appreciation of a phenomenon. However, it is difficult to make specific claims about reality, truth and knowledge based on focus group data and the interpretation of such data due to the inherent methodological weaknesses and the researcher may only see and hear what they want to see and hear.

The stance adopted in this study is that validity in qualitative research is concerned with whether the work presents a recognisable description or credible explanation of phenomena. The reader of the work must then assess the transferability of the findings. However, whether or not this stance would influence senior management and policy makers is questionable due the lack of universality and given the strong reliance of policy makers to listen to the persuasiveness of statistics and other quantitative research methods.

Allied to this point, is the nature of what can be claimed as a truth. Focus groups look at what the groups 'thinks' and concentrates on their interactions. However, the actual level of analysis to work at is unclear; is it the individual who is important or the group? During the analysis, interpretation and writing up stages, individual responses are used to illustrate findings, yet it is group analysis which is the important 'value adding' benefit of focus groups, using themes that individuals have raised in order to tap into 'softer issues' of hidden assumption people make on issues. This perhaps presents slight concerns with regards particular potential methodological inconsistencies with purpose, analysis and writing up, which focus groups may be prone to.

It is not to say that focus groups do not provide insight and yield enriched data, it is more a question of to what degree and what can be claimed on behalf for a wider population? However, this issue can be applied to other qualitative and quantitative approaches not just focus groups.

Focus groups are appropriate and important for pre-pilot work in qualitative studies, which are trying to identify key priorities and themes in order to get a handle on the issues, before drilling down

to core and significant themes and issues. Focus groups are useful when attempting to understand group language and coding, as this will help the researcher get a better sense and understanding for the subject area. The language, and the codes used are taken for granted within any field and focus groups are appropriate vehicles to unpack these taken for granted assumptions especially when studying the existence of a possible nexus between teaching and research. Bloor et al coin the phrase, that focus groups are useful for establishing the 'taxonomy of vernacular terms', which can be used to inform other elements of a research design (Bloor et al, 2001).

Focus groups are highly dependant on the skill of the facilitator(s) to encourage discussion, listen, to keep the discussion moving (by getting everyone involved), to be receptive to what is being said, to hone in on issues that need clarification and further discussion and to be able to act impartially and to synthesise effectively. These are skills not many people have, so their deployment should be thought out and appropriate to the topic being studied, and fit the researchers own philosophical research stance and how they perceive reality and the research process. In addition the researcher or research team needs to have extensive and highly honed facilitation skills, if focus groups are going to yield anything meaningful and be fit for purpose and be part of a much wider, more complex and sophisticated research design.

9. Conclusions

These two focus groups have allowed several issues to emerge that would not have emerged if a more quantitative method had been solely used. The focus groups have also demonstrated that any research pertaining to the nexus between teaching and research needs to be placed within a framework of different epistemological concepts (Brew 2001) in order to be of any benefit to the qualitative researcher.

The focus groups have at one level been extremely useful as they have identified a range of issues that need to be thought through and have provided a useful addition and contribution to the academic literature and the authors own ideas

regarding the existence of a nexus, which will inform future research designs and research work.

However, focus groups are not beneficial as standalone research methods, they are of benefit as part of a mixed and/or multi method research design when investigating and understanding the nexus between teaching and research. They should be used by skilled and experienced qualitative researchers as part of an array of methods such as in depth interviewing of staff, students and senior managers, policy document analysis and survey of attitudes to do with teaching, research, consultancy/income generation and academic administration and the use of narrative and story telling.

A mixed method research design where focus groups could be used at the beginning to inform and shape the questions for interview and for the questionnaire is appropriate, as the empirical and scientific aspects are better suited for studying the separate entities, such as research, teaching, etc. However, the more qualitative, interpretative orientated research methods may be appropriate for exploring the overlaps and the contested terrain that clearly exists when exploring the nexus which is where the real insight and rich ideas and data may lay. This research has not answered conclusively whether or not there is a nexus between teaching and research. It has demonstrated that focus groups on their own cannot answer this ongoing and continuing debate. However, the focus groups have yielded more questions and issues than it is capable of solving, such as;

- Does the mode and mechanisms of teaching used benefit from more or less research activity?
- Does a good research culture breed good teaching or vice versa?
- To what extent does the institutional view, mission and educational focus shape the relationship?
- Should the nexus between teaching and research be strengthened and if so how? What is research?
- What is good teaching?
- How can effectiveness be measured?
- At what level should students be exposed to research?

- Why do academics feel the need to have a symbiotic relationship between teaching and research?
- What do students think of the nexus?
- Should all universities undertake research activity?
- What are the national and international policies on the nexus between teaching and research?
- Can the relationship between teaching and research be measured?
- How have the UK wide system changes in HE impacted and or influenced teaching, research and their relationship?

However, having this questions raised does allow the researchers to develop appropriate research designs and focus groups have sufficient merit to warrant consideration and indeed deployment when seeking to explore the possible nexus between teaching and research, but care should be taken when using them and when making claims about truth, knowledge and facts based on their deployment.

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Appendix one

Three illustrative case studies

(Adapted From - Linking Teaching and Research, by Alan Jenkins, Oxford Brookes University)

These three case studies show different ways in which students can gain a deeper understanding of how research by staff underpins and links with what they teach.

A research-based department

A University College Information Systems Department requires all Year One students to do an assignment in semester one, in which students interview a member of staff about their research. Each first-year tutorial group is allocated a member of staff who is not their tutor. Tutorial groups are given, by that member of staff, three pieces of writing, which are representative of their work, and their CV, and then arrange a date for the interview. Before the interview students read these materials and develop an interview schedule, etc. On the basis of their reading and the interview, each student individually writes a 1,500 word report on: a) the objectives of the interviewee's research; b) how that research relates to their earlier studies; c) how the interviewee's research relates to his or her teaching; d) other interests and the subject area as a whole

A teaching department

Lectures and readings set out the main directions and controversies in the discipline for this final year honours module. Students were divided into groups and each group allocated a member of staff, who gave them a copy of their CV. A student group then interviewed that member of staff in class (with the rest of the students attending) about their academic history and views on the nature of contemporary issues from the field. The student group then wrote up the interview and set that person's view of the discipline in the wider context of the contemporary discipline.

Going beyond the department

This compulsory third-year synoptic module on Emerging Issues in Information Systems Thought, requires an essay that asks students: "With regard to a key information systems professional, summarise the main features of her/his work, show how this relates to methodology, and develop critiques of this work from one of the methodological perspectives presented in the module." This assignment requires extensive bibliographic work ... and when well prepared by this (and should the scholar be still alive!) students may contact the researcher by e-mail ... to ascertain specific questions. (They are not allowed to do a study of staff in their department.)

Initial discussion question:

Which one (if any) enhances student learning and why?